

REMARKS/ARGUMENTS

Claims 1 and 6-10 are pending in this application. By this Amendment, Applicant AMENDS claim 1 and CANCELS claim 5.

The Examiner rejected claims 1 and 7 under 35 U.S.C. § 102(b) as being anticipated by Menzer (U.S. 3,137,601). The Examiner rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Menzer in view of Speakman (U.S. 6,503,831) and Aizawa et al. (U.S. 5,179,456). The Examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Menzer in view of Speakman and Emerson (U.S. 3,353,895). The Examiner rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Menzer in view of Babb (U.S. 5,730,922). The Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Menzer in view of Speakman. The Examiner rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Menzer in view of Emerson and Arakawa (U.S. 2002/0060762).

As noted above, Applicant has canceled claim 5. Applicant respectfully traverses the rejections of claims 1 and 6-10.

Applicant's Claim 1 recites:

A plastic substrate for use in optical instruments, the plastic substrate comprising:
a composite substrate in which fibers are embedded in a resin matrix, the fibers being arranged to extend in two nearly orthogonal directions within a plane of the composite substrate; wherein
the composite substrate substantially transmits visible radiation and **has an in-plane retardation of substantially zero**; and
the composite substrate has negative uniaxial anisotropy. (emphasis added)

Applicant has amended claim 1 to recite the feature of "the composite substrate has negative uniaxial anisotropy" that was originally recited in canceled claim 5.

In Section Nos. 3 and 4 on pages 2-4 of the outstanding Office Action, the Examiner alleged that the combination of Menzer, Speakman, and Aizawa et al. teaches the features recited in amended claim 1. The Examiner alleged that Menzer teaches the features recited in Applicant's previously presented claim 1, which did not include the feature that was recited in

canceled claim 5. The Examiner alleged that Speakman teaches a composite substrate in which fibers are embedded in a resin matrix. The Examiner alleged that Aizawa et al. teaches the feature of "the composite substrate has negative uniaxial anisotropy" as recited in Applicant's amended claim 1 and that was recited in canceled claim 5.

Applicant respectfully disagrees with the Examiner's allegations that Menzer teaches the feature of "the composite substrate ... has an in-plane retardation of substantially zero" as recited in Applicant's claim 1 and that Aizawa et al. can be combined with Menzer.

First, Menzer fails to teach or suggest the feature of "the composite substrate ... has an in-plane retardation of substantially zero" as recited in Applicant's claim 1.

As pointed out by the Examiner in the last paragraph on page 3 of the outstanding Office Action, col. 2, ll. 40-45 of Menzer teach that the fibers and the resins have substantially the same refractive index. The Examiner concludes that this teaching of Menzer "contains the species of an in-plane retardation of substantially zero."

The Examiner is reminded that a genus does not necessarily anticipate or teach every species within the genus. The last paragraph MPEP § 2131.02 states:

Akzo N.V. v. International Trade Comm'n, 808 F.2d 1471, 1 USPQ2d 1241 (Fed. Cir. 1986) (Claims to a process for making aramid fibers using a 98% solution of sulfuric acid were not anticipated by a reference which disclosed using sulfuric acid solution but which did not disclose using a 98% concentrated sulfuric acid solution.).

MPEP § 2131.03(II) states:

Atofina v. Great Lakes Chem. Corp., 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006) wherein the court held that a reference temperature range of 100-500 degrees C did not describe the claimed range of 330-450 degrees C with sufficient specificity to be anticipatory. Further, while there was a slight overlap between the reference's preferred range (150-350 degrees C) and the claimed range, that overlap was not sufficient for anticipation. "[T]he disclosure of a range is no more a disclosure of the end points of the range than it is each of the intermediate points." *Id.* at 1000, 78 USPQ2d at 1424.

As explained in the first paragraph on page 5 of the Request for Reconsideration filed November 25, 2008, Menzer's teaching that the fibers and the resins have substantially the

same refractive index does not necessarily require that “the composite substrate ... has an in-plane retardation of substantially zero” as recited in Applicant’s claim 1. The in-plane retardation property of the composite substrate is related to how polarized light is affected by the composite substrate. Menzer fails to even mention polarized light. Thus, as with the patents in *Akzo* and *Atofina*, Menzer fails to teach or anticipate the feature of “the composite substrate ... has an in-plane retardation of substantially zero” as recited in Applicant’s claim 1.

Thus, Menzer fails to teach or anticipate the feature of “the composite substrate ... has an in-plane retardation of substantially zero” as recited in Applicant’s claim 1.

Second, Aizawa et al. cannot be combined with Menzer.

Aizawa et al. teaches that the step of stretching a sheet of an ion-containing polymer in a direction of the plane of the sheet, among other steps, reduces the in-plane optical anisotropy of the sheet of an ion-containing polymer. See, for example, claim 1 of Aizawa et al. However, the stretching step of Aizawa et al. cannot be applied to the sheets of Menzer with fibers arranged in two orthogonal directions within the plane of the sheets because the orthogonally-arranged fibers prevent the sheets of Menzer from being stretched in any direction. Thus, the stretching of Aizawa et al. cannot be used to alter the in-plane optical anisotropy of the sheet of Menzer.

Thus, contrary to the Examiner’s allegation, one of ordinary skill in the art would not have any reason in view of Aizawa et al. to modify the composite substrate of Menzer by stretching to achieve a “negative uniaxial anisotropy” as recited in Applicant’s claim 1.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Menzer. Further, Applicant respectfully submits that a rejection of claim 1 relying upon the combination of Menzer, Speakman, and Aizawa et al. would be improper for the above reasons.

The Examiner has relied upon Emerson, Babb, and Arakawa to allegedly cure various deficiencies in Menzer, Speakman, and Aizawa et al. However, Emerson, Babb, and Arakawa, applied alone or in combination with Menzer, Speakman, and Aizawa et al., fail to teach or suggest the feature of “the composite substrate ... has an in-plane retardation of substantially

zero" in combination with the other features recited in Applicant's claim 1 and fail to provide a reason why one of ordinary skill the art have modified the composite substrate of Menzer to include the feature of "the composite substrate has negative uniaxial anisotropy" as recited in Applicant's claim 1.

Accordingly, Applicant respectfully submits that the prior art of record, applied alone or in combination, fails to teach or suggest the unique combination and arrangement of elements recited in claim 1 of the present application. Claims 6-10 depend upon claim 1 and are therefore allowable for at least the reasons that claim 1 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a ONE-month extension of time, extending to June 24, 2009, the period for response to the Office Action dated February 24, 2009.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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